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AMENDMENTS TO THE CLAIMS

Please add or amend the claims to read as follows, and cancel without prejudice or disclaimer to resubmission in a divisional or continuation application claims indicated as cancelled:

1. (Currently Amended) A method of decoding an encoded block of data comprising:
partitioning the block into a first and a second sub-block assigned to a first and second process respectively; and
performing backward iterative calculations on the first sub-block within some point of a second portion of the second sub-block based on results from backward iterative calculations on a first portion of the second sub-block.
2. (Currently Amended) The method according to claim 1, further comprising:
performing forward iterative calculations on the first sub-block.
3. (Currently Amended) The method according to claim 2, further comprising:
calculating ~~an~~ a first output based on the results of the forward and backward iterative calculations performed on the first sub-block.
4. (Currently Amended) The method according to claim 3, further comprising:
performing forward and backward iterative calculations on the second sub-block and calculating a second output based on the results of the forward and backward iterative calculations on the second block.

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5. (Currently Amended) The method according to claim [[5]] 4, further comprising:

combining the first and second ~~output~~ outputs into a single data block.

6. (Currently Amended) The method according to claim 4, further comprising:

storing the results of the iterative calculation of the second sub-block on a temporary memory on which results from the iterative calculation of the first sub-block are stored.

7. (Original) The method according to claim 6, wherein results from the iterative calculations on the second sub-block are stored to a portion of the temporary memory after an output based on results stored in that portion of memory is calculated.

8. (Currently Amended) A decoder comprising:

a processing unit adapted to start to perform a backward iterative calculation on a first sub-block within some point of a second portion of the second sub-block, based on results of a backward iterative calculation performed by a second processing unit on a first portion of a second sub-block.

9. (Original) The decoder according to claim 8, wherein said processing unit is adapted to perform forward iterative calculations on the first sub-block.

10. (Original) The decoder according to claim 9, wherein said processing unit is adapted to calculate an output for the first sub-block based on the forward and backward iterative calculations for the sub-block.
11. (Original) The decoder according to claim 10, wherein said second processing unit is adapted to perform backward and forward iterative calculations of the second sub-block and to calculate an output for the second sub-block based on results from the forward and backward calculations on the second sub-block.
12. (Currently Amended) The decoder according to claim 11, wherein the processing unit comprises:
 - a forward iterative calculator, a backward iterative calculator and an output calculator.
13. (Currently Amended) The decoder according to claim 12, further comprising:
 - a temporary memory.
14. (Currently Amended) The decoder according to claim 13, wherein said temporary memory ~~may~~ is configured to store the results of iterative calculations on a first sub-block and then the results of iterative calculations on a second sub-block.
15. (Original) The decoder according to claim 14, wherein portions of said temporary memory are freed up as an output of the first sub-block is calculated.

16. (Currently Amended) The decoder according to claim 15, wherein results from iterative calculations on the second sub-block are stored in the freed portion of said temporary memory.

17. (Canceled)

18. (Canceled)

19. (Currently Amended) An apparatus comprising:

a data block parser to parse an encoded data block into at least first and second sub-blocks;

at least first and second processing units to perform forward and backward decoding at least on the first and second sub-blocks, respectively, of the encoded data block wherein, the backward decoding of the first sub-block is able to start within iterative calculations of the second sub-block; and

a memory to store outputs of at least the first and second processing units.

20. (Previously Presented) The apparatus of claim 19, wherein the first processing unit is able to perform a backward iterative calculation on at least a portion of the first sub-block based on results of a backward iterative calculation performed by the second processing unit on at least a portion of the second sub-block.

21. (Previously Presented) The apparatus of claim 20, wherein the first processing unit is able to perform forward iterative calculations on at least a portion of the first sub-block.

22. (Previously Presented) The apparatus of claim 21, wherein the first processing unit is able to decode the first sub-block and to provide an output based on the forward and backward iterative calculations performed on the first sub-block.

23. (Previously Presented) The apparatus of claim 20, wherein the second processing unit is able to perform backward and forward iterative calculations of the second sub-block and to provide an output based on results from the forward and backward calculations preformed on the second sub-block.
24. (Previously Presented) The apparatus of claim 19, wherein the memory is able to store the results of the iterative calculations preformed on the first sub-block and the results of the iterative calculations preformed on the second sub-block.
25. (Previously Presented) The apparatus of claim 24, wherein portions of the memory are freed up as an output of the first sub-block is calculated.
26. (Previously Presented) The apparatus of claim 25, wherein results output from iterative calculations on the second sub-block are stored in the freed up portions of the memory.
27. (Currently amended) The apparatus of claim 19, wherein the first and second sub-blocks ~~may be~~ are partitioned into two or more sub-block segments.
28. (Previously Presented) The apparatus of claim 27, wherein at least some of the sub-block segments are decoded by a separate thread and/or separate process running on one of the processing unit.
29. (Previously Presented) The apparatus of claim 27, wherein at least some of the sub-block segments are decoded by a separate thread and/or separate process running on a digital signal processor.
30. (Currently amended) A method comprising:
parsing an encoded data block into first and second sub-blocks; and

performing a forward and backward decoding on the first and second sub-blocks by decoders of first and second processing units wherein, the backward decoding of the first sub-block is able to start within iterative calculations of a portion of the second sub-block.

31. (Previously Presented) The method of claim 30, further comprising:

performing a backward iterative calculation on the first sub-block based on results of a backward iterative calculation performed on at least a portion of the second sub-block.

32. (Previously Presented) The method of claim 30, wherein performing a forward and backward decoding on the first and second sub-blocks comprises decoding sub-block segments by a separate thread and/or separate process.

33. (Previously Presented) The method of claim 30, further comprising:

storing the results output from iterative calculations on a first sub-block and the results output from iterative calculations on a second block.

34. (Previously Presented) The method of claim 33, wherein storing comprises:

freeing up portions of a memory as an output of the first sub-block is calculated; and
storing results output from iterative calculations on the second sub-block in the freed up portion of the memory.